

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Manus P. HENRY et al. Art Unit : Unknown
Serial No. : Unassigned Examiner : Unknown
Filed : March 23, 2001
Title : PROCESS MONITORING AND CONTROL USING SELF-VALIDATING
SENSORS

Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Prior to examination, please amend the application as follows:

In the claims:

Amend claims 3-6, 8 and 9 as follows:

3. (Amended) A process monitoring system as claimed in claim 1 in which most of the sensors are SEVA sensors.

4. (Amended) A process monitoring system as claimed in claim 1 in which the monitoring unit implements a multivariate statistical analysis of the measurement values of the sensors, and compares the results of that analysis with reference information to identify any significant apparent change in process conditions, to determine whether or not to initiate interrogation of the SEVA sensor/s.

5. (Amended) A process monitoring system as claimed in claim 1 in which the reference information is comprised of predictions of a model and historical data of stored statistical analyses.

6. (Amended) A process monitoring system as claimed in claim 1 in which the model utilizes actuator position information.

8 (Amended) A process monitoring system as claimed in claim 1 in which at least some SEVA sensors measure the same variable, and the SEVA measurements (VMV, VU and MV status) of the same variable are combined to generate a best estimate.

9. (Amended) A process monitoring unit adapted for use in a process monitoring system in accordance with claim 1.

REMARKS

Claims 3-6, 8 and 9 have been amended. It is believed that all of the claims are now in condition for examination.

The changes to the claims were merely to correct improper multi-dependency and to correct grammatical errors. No new matter has been added. Attached is a marked-up version of the changes being made by the current amendment. Please apply any other charges or credits to Deposit Account No. 06-1050. Respectfully submitted,

Date: March 23, 2001



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Version with markings to show changes made

In the claims:

Claims 3-6, 8 and 9 has been amended as follows:

3. (Amended) A process monitoring system as claimed in claim 1 **[or claim 2]** in which most of the sensors are SEVA sensors.

4. (Amended) A process monitoring system as claimed in **[any of the preceding claims]** claim 1 in which the monitoring unit implements a multivariate statistical analysis of the measurement values of the sensors, and compares the results of that analysis with reference information to identify any significant apparent change in process conditions, to determine whether or not to initiate interrogation of the SEVA sensor/s.

5. (Amended) A process monitoring system as claimed in claim **[4]** 1 in which the reference information is comprised of predictions of a model and historical data of stored statistical analyses.

6. (Amended) A process monitoring system as claimed in claim **[5]** 1 in which the model **[utilises]** utilizes actuator position information.

8. (Amended) A process monitoring system as claimed in **[any of the preceding claims]** claim 1 in which at least some SEVA sensors measure the same variable, and the SEVA measurements (VMV, VU and MV status) of the same variable are combined to generate a best estimate.

9. (Amended) A process monitoring unit adapted for use in a process monitoring system in accordance with **[any one of the preceding claims]** claim 1.